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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,930	01/11/2002	Scott A. Millsap	DP-305590	9261

7590 08/17/2006  
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EXAMINER
BARNES, CRYSTAL J

ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/043,930

Applicant(s)

MILLSAP ET AL.

Examiner

Crystal J. Barnes

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 June 2006.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 1-32 is/are allowed.  
6) ☒ Claim(s) 33-37 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 05 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The following is a Final Office Action in response to the Amendment received on 5 June 2006. Claims 1-37 remain pending in this application.

#### *Drawings*

2. The drawings were received on 5 June 2006. These drawings are acceptable.

#### *Claim Rejections - 35 USC § 101*

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 33-37 remain rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. 35 USC 101 defines four categories of inventions that Congress deemed to be the appropriate subject matter of a patent: processes, machines, manufacturers, and compositions of matter. The latter three categories define "things" or "products" while the first category defines "actions". The subject matter courts have found to be outside of, or exceptions to, the four statutory categories of invention is limited to

ideas, laws of nature, and natural phenomena. The courts have also held that a claim may not preempt ideas, laws of nature, or natural phenomena.

When functional descriptive material is recorded on some computer-readable medium is becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized.

When nonfunctional descriptive material is recorded on some computer-readable medium, in a computer or on an electromagnetic carrier signal, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material stored in a computer-readable medium, in a computer or on an electromagnetic carrier signal does not make it statutory. Such a result would exalt form over substance.

A computer data signal embodied in a carrier wave is nonstatutory as not being **tangibly embodied** in a manner so as to be executable and is non-statutory for failing to be in one of the categories of invention: processes, machines, manufacturers, and compositions of matter. **Intangible media** includes signals, carrier waves, transmissions, optical waves, transmission media or other media

incapable of being touched or perceived absent the tangible medium through which they are conveyed.

*Allowable Subject Matter*

4. Claims 1-32 are allowable.
5. The following is a statement of reasons for the indication of allowable subject matter:

As per claim 1, the prior art of record taken alone or in combination fails to teach during said given control loop time  $T = N$ , said calculated output control data from each individual control node is further transmitted over said communication bus to be later utilized by other control nodes coupled to said communication bus during a subsequent control loop time  $T = N+1$ .

As per claim 11, the prior art of record taken alone or in combination fails to teach during said given control loop time  $T = N$ , said calculated output control data from said first and second control nodes is further transmitted over said communication bus to be utilized during a subsequent control loop time  $T = N+1$ .

As per claim 21, the prior art of record taken alone or in combination fails to teach means for synchronizing, within a given control loop time  $T = N$ , a selected

set of reference input signals and feedback signals to be used in producing said first and second actuator outputs; wherein said selected set of reference input signals and feedback signals used in producing said first and second actuator outputs are generated during a previous control loop  $T = N-1$ .

As per claim 28, the prior art of record taken alone or in combination fails to teach during said given control loop time  $T = N$ , said calculated output control data from each individual control node is further transmitted over a common communication bus to be later utilized by other control nodes coupled to said communication bus during a subsequent control loop time  $T = N+1$ .

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

6. Applicant's arguments filed 5 June 2006 have been fully considered but they are not persuasive.

In response to applicants' arguments that electromagnetic signals are statutory subject matter, the examiner maintains that a computer data signal embodied in a carrier wave is nonstatutory as being **intangibly embodied** in a manner so as to be executable and is non-statutory for failing to be in one of the categories of invention. **Intangible media** includes signals, carrier waves, transmissions, optical waves, transmission media or other media incapable of being touched or perceived absent the tangible medium through which they are conveyed. A claim reciting a signal encoded with functional descriptive material must fall within any of the categories of patentable subject matter set forth in 35 USC 101 to be statutory subject matter.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the

advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is 571.272.3679. The examiner can normally be reached on Monday-Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571.272.3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



CJB

8 August 2006